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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,845	09/23/2005	Guenter Wanschura	18695	6013

272 7590 11/30/2007

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EXAMINER	
DUFF, DOUGLAS J	

ART UNIT	PAPER NUMBER
3748	

MAIL DATE	DELIVERY MODE
11/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,845	WANSCHURA ET AL.	
	Examiner	Art Unit	
	Douglas J. Duff	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 15-26* is/are rejected.

7)☒ Claim(s) *8-14,27 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/23/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 5, 6, 15, 16, 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Eckerle et al. (US 3779674). Regarding claim 1, Eckerle discloses a pump comprising a pump cover (73, 70), an internal rotor (4) disposed rotatably in a recess of the pump cover and formed in a rotationally fixed manner on a drivable plug-in shaft (1), and an external rotor (7) rotatably disposed in the recess of the pump cover in such an eccentric manner relative to the axis of rotation of the internal rotor that the external rotor is in mesh with the internal rotor only in a first angle-of-rotation range (bottom of Fig. 1) and in a second angle-of-rotation range (top of Fig. 1) lying opposite the first angle-of-rotation range is in contact with an inner surface of a web (5), which is disposed in the recess and is in turn in contact at its outer surface with the external rotor (Fig. 1), so that after closing of the recess by a cover plate there is formed in the recess an admission pressure chamber (dependent on rotation, right or left of Fig. 1, between 4 and 7, after 5) and a low-pressure chamber (dependent on rotation, right or left, between 4 and 7, before 5), wherein a holding element (83), which is held in the pump cover, in the initial assembled state of the gear pump holds the cover plate at a fixed angle of rotation on the pump cover (Fig. 13).

3. Regarding claims 3, 5 and 6, Eckerle discloses the holding element held in a first recess (72 portion) provided in the pump cover and in the initial assembled state of the pump holds the cover plate by means of a second recess (72, bottom side) provided in the cover plate at a fixed angle of rotation on the pump cover (as shown in Fig. 13), the holding element made of a deformable plastics material (col. 7, line 19), the holding element comprising a cylindrical partial body (top part, 83, Fig. 13), the outside diameter of which is slightly larger than the inside diameter of the first recess (Fig. 13, deformable into conical shape 72), so that in the course of insertion of the holding element into the first recess the cylindrical partial body experiences a specific radial bias, by means of which a force-locking connection exists between the holding element and the pump cover (83 and 43 locked together).

4. Regarding claims 15-18 and 20, Eckerle discloses the web (5) in the recess of the pump cover is sickle-shaped (Fig. 1), the final assembled state of the pump includes the cover with the cover plate at a fixed angle of rotation fastened by means of screw connectors (79) to a connection plate (70) of a hydraulic pump, the admission pressure chamber is connected by kidney-shaped recesses (52) in the plate and the connection plate to an intake channel of the hydraulic pump and the low pressure chamber is connected by kidney shaped recesses (51) in the cover plate (Fig. 8) and the connection plate to a hydraulic tank (inherent to hydraulic pumps, background) the plug in shaft (1) is rotatably mounted in a first plain bearing (inside bore of 84, Fig. 11) in the pump cover (84) and in a plain bearing (inside bore of 70, Fig. 14) in the connection plate (70) and the plug in shaft (1) in the final assembled state of the gear pump is fixed

in its axial position by means of a round ring (inside bore of 84), which is fitted on the plug in shaft at the level of the cover plate (Figs. 11 and 13).

5. Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Banion et al. (US 6862864). Regarding claim 21, O'Banion discloses a holding element comprising a cylindrical partial body (24"), which is introducible into a recess of a first article (right side of Fig. 24) with a simultaneous build-up of a radial bias in such a way that a force-locking connection is established between the holding element and the first article, and a conical partial body (26"'), which adjoins the cylindrical partial body and in an initial assembled state is passed through a recess of a second article (left side of Fig. 24) and is in contact with the recess of the second article in such a way that by means of the holding element a positive connection is realized between the first article and the second article (Fig. 24).

6. Regarding claims 22-24, O'Banion discloses the surface of the cylindrical partial body of the holding element having scales (35"'), an inner bore (30"') for receiving a screw and the inside diameter of which approximately corresponds to the outside diameter of the screw (Fig. 24), where the inner bore portion situated in the conical partial body in continuation of an inner bore portion situated in the cylindrical partial body (Fig. 24) and the diameter of which is designed smaller (tip) than the diameter of the inner bore portion situated in the cylindrical partial body (Fig. 25), used to ventilate the recess of the first article (without screw inserted, Fig. 24).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckerle in view of Kuo (US 6338586). Regarding claim 1, Eckerle discloses the pump according to claim 1, but fails to disclose the cover plate in the final assembled state of the gear pump being released by the holding element.

9. Kuo teaches a cover plate (right side of 2, Fig. 3) in the final assembled state (Fig. 4) being released by a holding element (5, Fig. 4). It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a holding element to release a cover plate in the final assembled state in order to provide a locking and holding structure for the cover plate while in an initial assembly stage, then release the cover plate for the final assembled state in a smooth and easy design (col. 2, lines 14-15) that saves manpower and time during the production process (col. 4, lines 44-46).

10. Regarding claim 2, the modified Eckerle device discloses the pump of claim 3 including the holding element (5) in the final assembled state (Fig. 4) of the gear pump is displaced in a first recess (inside 2) to such an extent that the cover plate (2) is no longer held by the holding element (5, Fig. 4).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckerle in view of O'Banion. Eckerle discloses the pump according to claim 6, but fails to disclose the surface of the cylindrical partial body of the holding element having scales.

12. O'Banion teaches a cylindrical partial body (35''') of a holding element having scales (35'''). It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize scales on the surface of the cylindrical partial body of the holding element in order to inhibit removal of the expanding element (col. 5, lines 43-45).

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckerle in view of Wahlmark (US 2132813). Eckerle discloses the pump of claim 1, but fails to disclose the internal rotor fastened by a clamping key engaging a keyway of the internal rotor in a rotationally fixed manner to the plug-in shaft.

14. Wahlmark teaches a gear pump with an internal rotor (19) fastened by a clamping key (20) engaging a keyway of the internal rotor in a rotationally fixed manner to the plug-in shaft (18). It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize a clamping key in a keyway to rotationally fix the rotor to the shaft because fixing a rotor to a shaft using a key and keyway is one of a finite number of design configurations that have the predicted result of transmitting the rotation of a shaft to a rotor in a simple and secure way.

15. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Banion in view of Andre et al. (US 5106225). Regarding claim 25, O'Banion discloses the element of claim 21 including the annular area tapers (20''') with

increasing recess depth (tapers out) in such a way that up to the height of the base of the recess (at 30''') there are formed in the center of the conical partial body a cylindrical bottom partial body and at the periphery of the conical partial body a hollow cone shaped bottom partial body (left side of Fig. 24).

16. O'Banion fails to disclose the hollow cone shaped bottom partial body being of constant wall thickness.

17. Andre et al. teaches a holding element with a hollow cone shaped bottom partial body being of constant wall thickness (16). It would have been obvious for a person having ordinary skill in the art at the time the invention was made to utilize the cone shaped body being of constant wall thickness in order to provide a simple construction for the design of a holding element through the use of material that is of a constant thickness (Fig. 11).

18. Regarding claim 26, the modified O'Banion device discloses the element of claim 25 including the conical partial body, owing to the annular recess is deformable in such a way that in a second assembled state (second assembled state has tapered right end in right plate recess, Fig. 24) it is introducible by its hollow-cone-shaped bottom partial body entirely into the recess of the first article (right side of Fig. 24).

Allowable Subject Matter

19. Claims 8-14, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Duff whose telephone number is (571) 272-3459. The examiner can normally be reached on M-Th 7 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Douglas J. Duff

11/20/07

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